

CLAIMS

1. An ignition coil (1) for igniting a fuel mixture in an internal combustion engine having

a winding element (2) on which is wound a coil winding (3) which is in the form of a cylinder and which may be connected to a spark plug on its frontal surface,

a sheet metal jacket (4, 5) which encloses the winding element (2) with the coil winding (3) on its circumference, and

an elastic insulating element (7) for insulation from high voltage which is in the form of a hollow cylinder which is mounted on the winding element (2) on a section facing the frontal surface of such winding element (2) and which is at least in part mounted between the winding element (2) and the sheet metal jacket (4, 5),

characterized in that

the elastic insulating element (7) and/or the winding element (2) has/have a sealing profile (8) in the area in which the elastic insulating element (7) is mounted between the winding element (2) and the sheet metal jacket (4, 5).

2. The ignition coil device (1) for igniting a fuel mixture in an internal combustion engine having

a winding element (2) on which is wound a coil winding which winding element (2) is cylindrical in shape and which may be connected on a frontal side to a spark plug,

a sheet metal jacket (4, 5) which encloses the winding element (2) with the coil winding (3) on its circumference, and

an elastic insulating element (7) for insulation from high voltage which is in the form of a hollow cylinder and is mounted on the winding element (2) on a section of such winding element (2) facing the frontal surface, and at least in part between the winding element and the sheet metal jacket,

characterized in that

a cavity between the elastic insulating element (7) and the sheet metal jacket (4, 5) is filled with a sealing compound (10).

3. The ignition coil device as claimed in claim 1 or 2, *wherein* the elastic insulating element (7) comprises an elastomer and is applied by spraying to the winding element (2).
4. The ignition coil device as claimed in claim 1, 2, or 3, *wherein* the elastic insulating element (7) is applied to the winding element (2) by adhesion.
5. The ignition coil device as claimed in one of claims 1 to 4, *wherein* a primary winding (3) is wound on the winding element (2).
6. The ignition coil device as claimed in one of claims 1 to 5, *wherein* a sealing compound (9) is introduced between the winding element (2) and the sheet metal jacket (4,5), in addition to the elastic insulating element (7).
7. The ignition coil device as claimed in one of claims 1 to 6, *wherein* a cavity (6) extending radially is present between the coil winding (3) and the sheet metal jacket (4, 5).
8. The ignition coil device as claimed in claim 7, *wherein* the cavity (6) is filled at least in part with a sealing compound.

9. The ignition coil device as claimed in one of claims 1 to 7, *wherein* an insulating sheet (11) or a shrunk-on tube is mounted on the surface of the coil winding (3) under the sheet metal jacket (4, 5).
10. The ignition coil device as claimed in one of claims 1 to 9, *wherein* the sheet metal jacket (4, 5) comprises a plurality of metal plates mounted radially one above the other.